

THE OZARK FLORA—SOME COLLECTIONS OF NOTE

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ABSTRACT

Recent collecting has produced eight major range extensions or other unusual plants for the Ozark flora.

A newcomer to the Missouri area last summer, 1969, I made some 500 vascular plant collections with a view to acquainting myself with the plants growing in the Ozarks and the Mississippi River Valley. Most collecting was in the St. Francois Mountain area but one foray was made to the "bootheel" counties of southeastern Missouri and into adjacent Arkansas; and a number of trips included Illinois counties near St. Louis. Material of all collections is lodged with the Missouri Botanical Garden (MO), and duplicates were distributed to other institutions as indicated.

The following list of major range extensions or unusual plants does not include all new county records which may have been taken. In spite of the large collections made in the past by such botanists as Bush, Palmer and Steyermark and the very fine presentation of results in Steyermark's (1963) *Flora of Missouri*, there is still a great deal of work to be done before this area can be said to have a well-known flora. That such indiscriminate collecting as my own last summer could produce the following list is evidence of the need for much more field work.

ANEMONELLA THALICTROIDES (L.) Spach f. *FAVILLIANA* Bergs. in Fass. *D'Arcy* 3130 (MO).

Forma *favilliana* is "a beautiful form of Rue Anemone, resembling a miniature tuberous begonia, marigold, or zinnia in the buttonlike condensed flowers" (Steyermark, 1963). This pretty little variant was found growing at the wet edge of a sloping oak woods by a secondary road about one mile north of Bonne Terre, St. Francois County, Missouri. Only one plant was seen growing with the usual understory sprinkling of the typical variety; and, in fact, my collection is mixed with plants of the typical form.

Formerly known in the wild in Missouri only from Putnam County in the extreme north and from Carter County in the south of the state, my collection provides an intermediate station. This distribution does not suggest any former wide-spread distribution or relict status but seems rather to be the result of the rare recurrence of a mutant gene. Because they are apparently sterile, new occurrences of the form are unlikely to build up significant populations, although Steyermark (1963) mentions propagating it by dividing the roots.

Forma *favilliana* was first described from Wisconsin in 1946. Bernard Boivin (1957) provided the alternative name: *Thalictrum thalictroides* (L.) Boiv. f. *favilliana* (Bergs. in Fass.) Boiv.

RANUNCULUS ARVENSIS L. *D'Arcy* 3181 (MO, BSI, GH, UMO).

This very showy yellow buttercup was taken on the north side of Huffman, Arkansas. The flat, low fields in this area were host to frequent rather large patches of the weed. Huffman is in the extreme northeastern corner of Mississippi County, Arkansas, and is less than five miles from the southeastern corner of the Missouri bootheel. *Ranunculus arvensis* is a likely candidate for colonization of any of the low areas bordering the Mississippi River in this latitude. In 1959, Muelenbach found it on the north side of the city of St. Louis, not in St. Louis County as indicated by Steyermark in his *Flora*.

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DRABA APRICA Beadle *ex* Small. *D'Arcy* 3257 (MO, GH, LE, UMO); *Palmer* 5500 (MO).

While checking the identification of my specimen, I came across the Palmer collection, which was taken 5 May, 1914, from "Dry rocky ground—high hills, Noel, McDonald County, Missouri." This is two hundred miles to the southeast of the Reynolds County report of Steyermark (1963) and is about seventy-five miles north of the southeastern Oklahoma station reported by Rollins (1961). The Palmer collection consists of ten plants which I take to be the same taxonomic entity. It was unnamed as to species, but on a second label Palmer indicated he had something unusual: "Note sparingly dentate stem leaves, short branches with fascicle-like pods and *pubescent* fruits."

Draba aprica has been a puzzle to other botanists besides Palmer. Schulz (1927), Nuttall (Torrey & Gray, 1838), and Hitchcock (1941) accepted this plant as a variety (var. *fastigiata* Nutt. *ex* T. & G.) of *Draba brachycarpa* Nutt. *ex* T. & G., which is very similar. Small (1913), Fernwald (1934), Rollins (1961), and Steyermark (1940, 1963) held it to be a distinct species, with Rollins (1961) providing the most recent and emphatic argument. Hitchcock discussed the Palmer specimen (*Palmer* 5500, POM), suggesting that Missouri plants and those reported earlier from Georgia originated independently and that they might be tetraploids. There has also been a question as to the correct origin of Nuttall's plants which form the type of var. *fastigiata*. Steyermark (1959) shows the route of Nuttall's travels passing about midway between the localities for the Palmer collection and the Oklahoma collection reported by Rollins, so the Arkansas location indicated by Nuttall is certainly plausible.

My collection is from a steep oak-pine slope just east of the St. Francois River in Madison County, Missouri. This isolated hill is only about two miles north of the St. Francois Shutlins where Steyermark collected *D. aprica* in 1930. Apparently the Madison County population of pubescent fruited plants is persistent, whatever taxonomic rank is applied.

CORNUS FLORIDA L. f. *RUBRA* (Weston) Palmer & Steyermark. *D'Arcy* 3235 (MO, A, BSI, SIU, UAC).

Growing in a well-shaded location on a south-facing slope of very fine-grained red granite and in an oak-pine woods with a fine understory of dogwood and sassafras about one mile west of Mill Creek, Madison County, Missouri, is a small dogwood tree which bears bright pink flowers. Not only were the bracts pink, but they were striped with lighter and darker shades of pink and crimson. Examination of neighboring trees showed that they too had an element of pink in the bracts, but the admixture of color was so small that they might have passed as ordinary white dogwoods. Apparently the gene or genes causing the coloration occurs with varying effect throughout this small population. Steyermark (1963) states that the pink flowered dogwood is rarely encountered in the wild. In this case, the woods where it occurred seemed to have been undisturbed for many years.

DESMODIUM VIRIDIFLORUM (L.) DC. *D'Arcy* 3779 (MO, 3 sheets).

This tick clover, which has tomentose petiolules and small purple flowers which fade teal blue, has leaflets of quite variable size, the medians ranging from less than 4 cm to over 11 cm long on neighboring plants. Steyermark (1963) questioned the validity of *D. nuttallii* (Schindl.) Schub. as distinct from *D. viridiflorum* but deferred to Isely (1955) and included it as a separate species.

From my collection it is not apparent which of the two species was present. One element clearly conforms to *D. nuttallii* as delineated by Isely (1953; 1955), while the others either conform to *D. viridiflorum* or lack fruits adequate for certain determination. Except for leaf size, the population looked rather uniform in the field, but it may have been a mixed population.

This colony was under shade on a red granite hillside about one mile west of Mill Creek, Madison County. It was only a few feet from the site of the pink dogwood described above and just above the road where the *Artemisia ludoviciana* patch (below) was found. This hill is a southeastern extension of Devon Mountain. Treated as *D. viridiflorum sensu stricto*, this collection is a considerable northward extension of range; while as *D. nuttallii* it represents a new county record on the northern edge of the Missouri range.

PHYSOSTEGIA FORMOSIOR Lunell. *D'Arcy* 3804 (MO, DAO, FSU, GH, LE, SIU, UMO).

A showy if sprawling mint, this plant was scattered along the upper tributaries of Crane Pond Creek in Iron County where it was competing with *Hamamelis vernalis* for footholds

on the small gravel bars and banks. Most plants were tilted to one side as if the streams had just pushed them over, and that was likely the case. Although he does not refer to it in his text, Steyermark (1963) shows a dot on his map indicating this species for Iron County. It is difficult to believe, however, that this is the only county in the St. Francois Mountain area where this species occurs.

KRIGIA OCCIDENTALIS Nutt. *D'Arcy & Porter 3328 (MO)*.

"In sandy soil under oaks & pines above large spring, Pickle Springs, Ste. Genevieve County" is the label information on the plant I collected with Dr. D. M. Porter on 25 May, 1969. This species is comparable in size with *K. virginica* (L.) Willd. which occurs in the same region, but it has fewer involucre bracts.

The Pickle Springs locality is at the eastern edge of the Cambrian La Motte sandstone formation and is the westernmost station for a number of Appalachian and other eastern plants, especially bryophytes. In this case, however, it is the easternmost location for a southwestern species centered in Texas and Oklahoma and represents an eastward range extension of about two hundred miles.

ARTEMISIA LUDOVICIANA Nutt. *D'Arcy 3772 (MO, DAO, GH, ISC, LE, SIU, UMO)*.

A large white patch of roadside weeds provided the specimens of this species. On the lower side of State Road T, about one mile west of Mill Creek in Madison County, as it winds up around a red granite hill was a weed patch containing flourishing populations of *Lespedeza striata*, *Ambrosia bidentata* and *Croton monanthogynus*. The *Ambrosia* was in several pure colonies about 1 m across. The red granite hill is the same that provided the specimens of *Cornus florida* and *Desmodium viridiflorum* noted above. This location is a significant extension of present known range of *A. ludoviciana* in an easterly direction, although Nuttall (1818) reported it from "the banks of the Mississippi, near St. Louis; also on the alluvial plains of Missouri."

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